Controlled expression of cholera toxin B subunit from Vibro cholerae in Escherichia coli.

Abstract

The ctxB gene, the causative agent of cholera epidemic was successfully cloned from V. cholerae in E. coli. The insertion of the gene was confirmed by PCR as well as restriction digestion analyses. The sequencing results for the gene confirmed that the insert was in the correct orientation and in-frame with the P(BAD) promoter and it showed that the gene was 99% homologous to the published ctxB sequence. The CTB protein was successfully expressed in E. coli using the pBAD/His vector system. The expected protein of approximately 14 kDa was detected by SDS-PAGE and Western blot. The use of pBAD/His vector to express the cholera toxin gene in E. coli would facilitate future study of toxin gene products.

Keyword: Ctx; Expression; Escherichia coli; Cholera.